

Service Service **Service**



Service Manual

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3141 785 30836

1.0 TECHNICAL SPECIFICATION

General

Dimensions (WxLxH) :	19.4 x 17.1 x 3.2 cm 7.6 x 6.77 x 1.3 inches
Weight :	0.86 kg / 1.89 lb
Power supply :	DC 9V 2.2A
Power consumption :	30W
Operating temp. range :	0 - 50°C (32 ~ 122°F)
Laser wavelength:	650nm
Video system :	NTSC / PAL / AUTO
Frequency response :	20Hz ~ 20KHz ± 1dB
Signal/noise ratio	≥85dB
Audio distortion + noise	≤ 80(1KHz)
Channel separation:	≥85dB
Dynamic range	≥80dB
Output	
Audio out (analog audio)	Output level: 2V ± 10%
Load impedance:	10KΩ
Video out Output level:	1Vp - p ± 20%
Load impedance:	75Ω

Current consumption

DC-IN SUPPLY (9.0V)	
Battery Charging Current	1.2A typ.
BATT. SUPPLY (7.2V)	
Power Off	0A
Playback with TFT on	<1.2A typ.
Playback without TFT on	<600mA
Battery playtime	>2.5hrs

Headphone out (headphone output load 2x16 ohm)

Maximum output power :	>10Mw
Frequency response :	20Hz - 20kHz
SNR (A-wght) :	80dB typ.
THD (1kHz) :	<1%
Left-Right Channel	32dB typ.
Separation :	
Left-Right Channel	1dB
Balance :	

Supported disc type

DVD video discs:



Video CD:

Audio CD :



DivX video discs:
(for PET725)

In addition, this unit can play DVD+R & DVD+RW and CD-R & CD-RW that contains audio titles or MP3 or JPEG files.

You cannot play disc other than the above listed.
(CVD, CD-ROM, CD-Extra, CD-G and CD-I discs cannot be played on this DVD player)

Software upgrades

For the best performance of your DVD Portable. Check www.philips.com/support for latest software upgrades available.

To check the software version of your DVD Portable.

1. Press the SETUP key to enter the setup menu.
2. Press RETURN and then press 1, 2 and 3 on the remote control.
3. The display will show the software version as the date of which the software was built on the bottom of the screen. E.g. 050303

Procedure on how to upgrade the software of the DVD Portable

1. Download the latest software from the Philips support site.
2. Unzipped the files and then burn it onto a CD ROM then playback the CD ROM on the DVD Portable.

Pixel specification

<= 3 (max. 0 bright dots and 3 dark dots)

2.0 SAFETY INSTRUCTIONS

GB WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

ESD



NL WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD). Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat. Houd componenten en hulpmiddelen ook op hetzelfde potentiaal.

F ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation. Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité. Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

D WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD). Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren. Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes. Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

I AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD). La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

GB

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

NL

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

F

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

D

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

I

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

"After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5mA."



GB Warning !

Invisible laser radiation when open. Avoid direct exposure to beam.

S Varning !

Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

SF Varoitus !

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

DK Advarse !

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

2.1 ESD PROTECTION

- レンズには絶対に触れないでください。
- DO NOT TOUCH THE LENS.
- LINSE NICHT BRÜHREN.
- NE PAS TOUCHER LA LENTILLE.

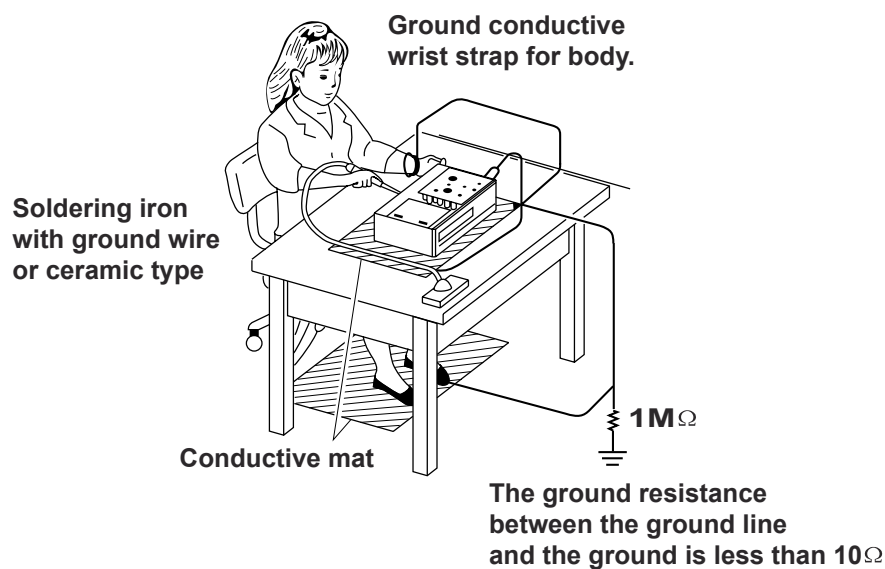
When the power supply is being turned on, you may not remove this laser cautions label. If it removes, radiation of laser may be received.

PREPARATION OF SERVICING

Pickup Head consists of a laser diode that is very susceptible to external static electricity.

Although it operates properly after replacement, if it was subject to electrostatic discharge during replacement, its life might be shortened. When replacing, use a conductive mat, soldering iron with ground wire, etc. to protect the laser diode from damage by static electricity.

And also, the LSI and IC are same as above.



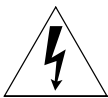
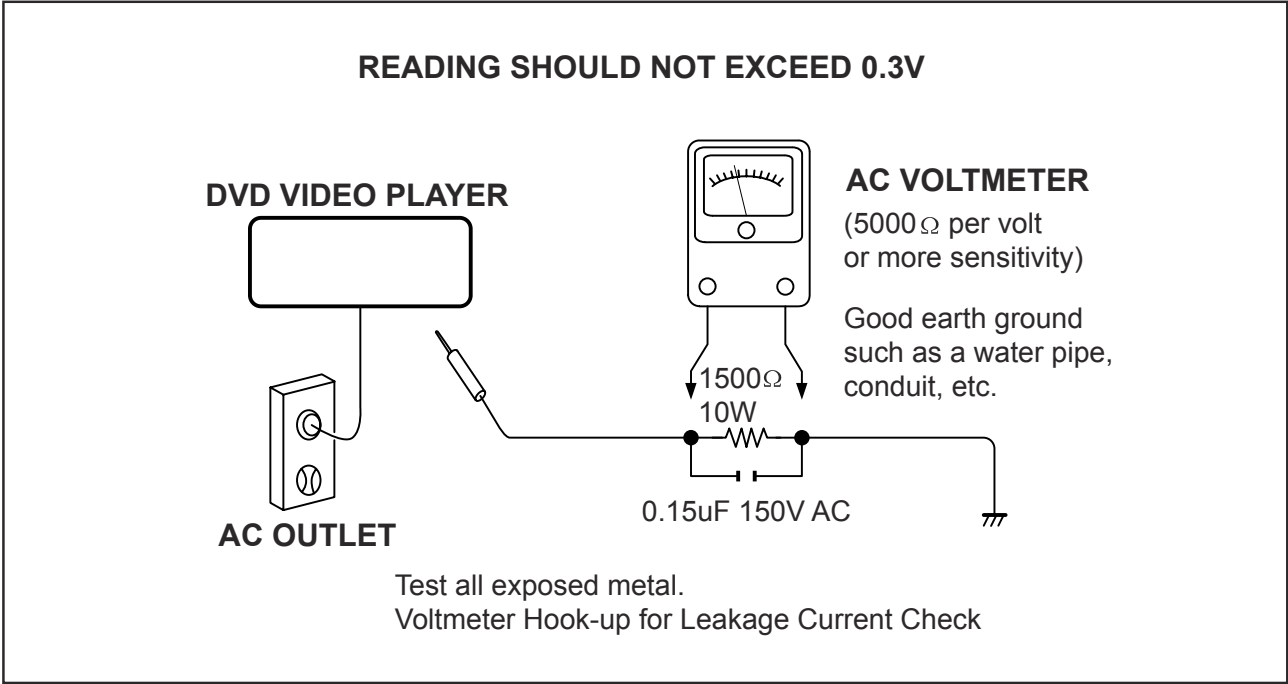
SAFTY NOTICE

SAFTY PRECAUTIONS

LEAKAGE CURRENT CHECK

Plug the AC line cord directly into a 120V AC outlet (do not use an isolation transformer for this check). Use an AC voltmeter, having 5000Ω per volt or more sensitivity. Connect a 1500Ω 10W resistor,paralleled by a 0.15uF 150V AC capacitor between a knomn good earth ground (water pipe, conduit, etc.) and all exposed metal parts of cabinet (antennas, handle bracket, metal cabinet screwheads, metal overlays, control shafts, etc.).

Measure the AC voltage across the 1500Ω resistor. The test must be conducted with the AC switch on and then repeated with the AC switch off. The AC voltage indicated by the meter may not exceed 0.3V.A reading exceeding 0.3V indicates that a dangerous potential exists, the fault must be located and corrected. Repeat the above test with the DVD VIDEO PLAYER power plug reversed. NEVER RETURN A DVD VIDEO PLAYER TO THE CUSTOMER WITHOUT TAKING NECESSARY CORRECTIVE ACTION.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

3.0 INSTRUCTIONS FOR USE

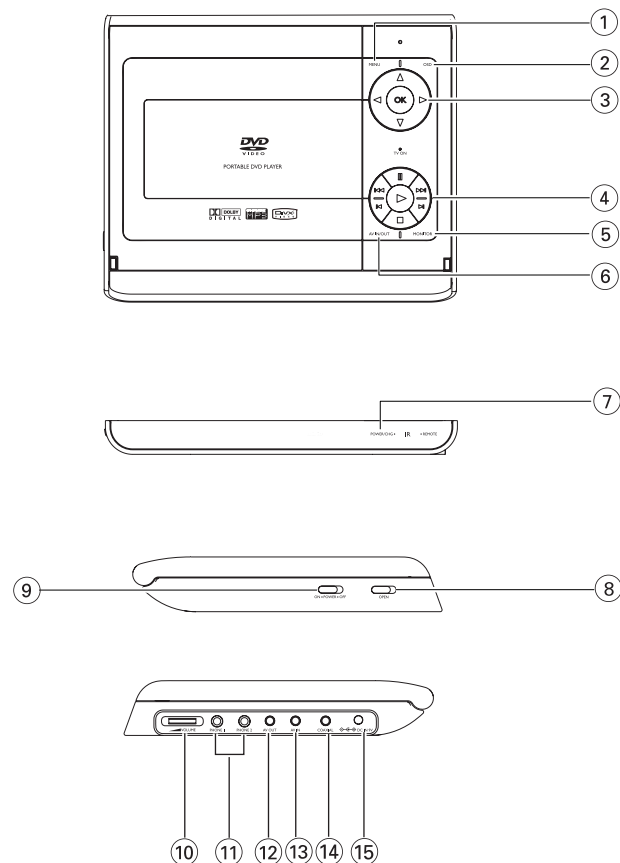
- | | |
|--|--|
| <p>① MENU
Displays MENU page</p> <p>② OSD
On Screen Display on / off</p> <p>③ ▲, ▼, ◀, ▶
Up / down / left / right cursor
OK
Confirms selection</p> <p>④ II
Pause playback
▶
Starts / resumes playback
■
Press twice to stop playback
◀◀ / ▶▶
For previous (◀◀) or next (▶▶)
chapters, tracks or titles
◀ / ▶
Search backward (◀◀) or search
forward (▶▶)</p> <p>⑤ MONITOR
Selection display
☼ To adjust the brightness with
◀ ▶
🎨 To adjust the color with ◀ ▶

☐ To adjust the screen of 16:9
or 4:3 with ◀ ▶</p> <p>⑥ AV IN/OUT
A/V out
A/V in (AUX)</p> | <p>⑦ POWER/CHG
Power and charging indicator
IR
Remote sensor</p> <p>⑧ △ OPEN
Opens disc door to insert or
remove disc</p> <p>⑨ ON · POWER · OFF
Switches the player on / off</p> <p>⑩ VOLUME
Volume control</p> <p>⑪ PHONES 1 & 2
Headphones jack</p> <p>⑫ AV OUT
Audio/video output jack</p> <p>⑬ AV IN
Audio/video input jack</p> <p>⑭ COAXIAL
Digital Audio output jack</p> <p>⑮ DC IN 9V
Power supply socket</p> |
|--|--|

CAUTION

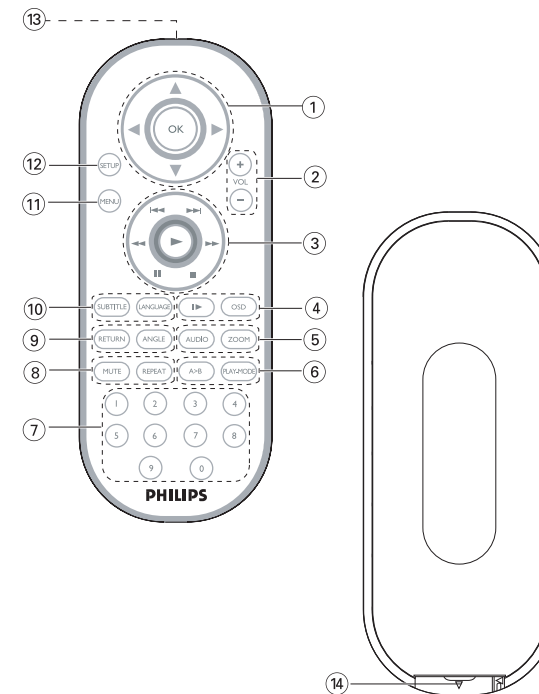
Use of controls or adjustments or performance of procedures other than herein may result in hazardous radiation exposure or other unsafe operation.

DVD PLAYER LAYOUT



Remote Control

- | | |
|---|---|
| <p>① ◀, ▶, ◀, ▶
Up / down / left / right cursor
OK
Confirms selection</p> <p>② VOLUME
Volume control</p> <p>③ ◀◀ / ▶▶
For previous (◀◀) or next (▶▶) chapters, tracks or titles
⏸
Pause playback
▶
Starts / resumes playback
■
Press twice to stop playback
◀◀ / ▶▶
Search backward (◀◀) or search forward (▶▶)</p> <p>④ OSD
On Screen Display on / off
⏪
Slow motion</p> <p>⑤ AUDIO
Audio language selector
ZOOM
Enlarges video image</p> <p>⑥ A > B
To repeat or loop a sequence in a title
PLAY-MODE
Selects play order options</p> | <p>⑦ 0 - 9
Numeric keypad</p> <p>⑧ MUTE
Muting play volume
REPEAT
Repeats chapter / title / disc</p> <p>⑨ RETURN
For VCD menu page
ANGLE
Selects DVD camera angle</p> <p>⑩ SUBTITLE
Subtitle language selector
LANGUAGE
Language selector</p> <p>⑪ MENU
Displays MENU page</p> <p>⑫ SETUP
Enters SETUP menu</p> <p>⑬ INFRA RED PORT</p> <p>⑭ BATTERY COMPARTMENT</p> |
|---|---|



4.0 MECHANICAL INSTRUCTIONS

1. Back View as Fig.1
Remove screws to remove base



Fig.1

2. Disconnect key control wire and 20 pins harness,
Remove screws to dismantle the plate,
Soldered short pattern for laser diode as Fig.2

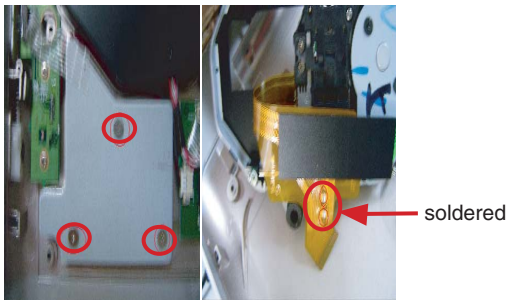
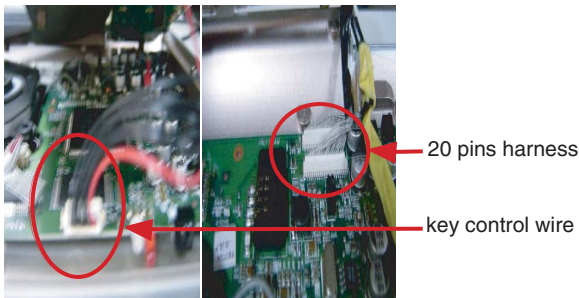


Fig.2

3. Remove DVD driver and main board as Fig.3,4
Disconnect DVD driver and main board

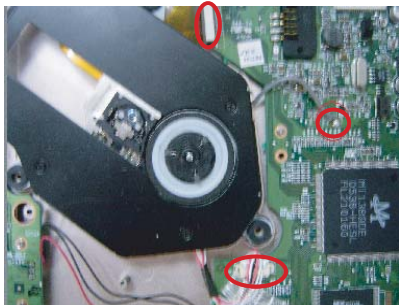


Fig.3

Remove DVD driver and main board

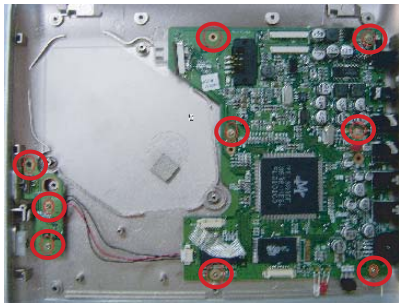


Fig.4

4. Remove key board and other parts as Fig.5

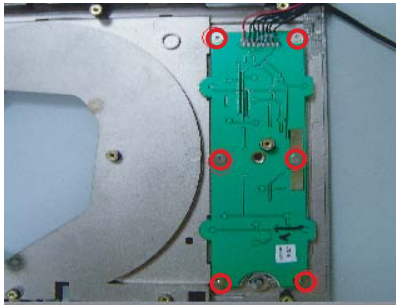


Fig.5

5. Remove top cover as Fig.6



Fig.6

6. Disconnect speakers and IF board
Remove IF board as Fig.7.

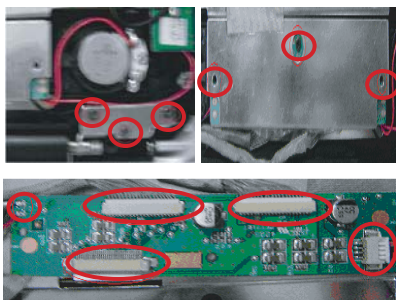


Fig.7

7. Remove TFT shield, HV board and
LCD TFT as Fig.8,9.



Fig.8



Fig.9

5.0 TROUBLESHOOTING & SERVICE TIPS

Procedure to change regioncode

1. Power on player and open DVD Door.
2. Press <Set Up> at Remote Control. In <Set Up Menu> select <Preferences> then press <OK>.
3. For PET72x - Press successively 2 1 2 2 2 5. ◀. ▼.
4. Display will show <Region Code 2> for Europe:
5. Press key to input preference region code (see below table).
6. Switch off and re-switch on the product.
7. Verify Region code change done.

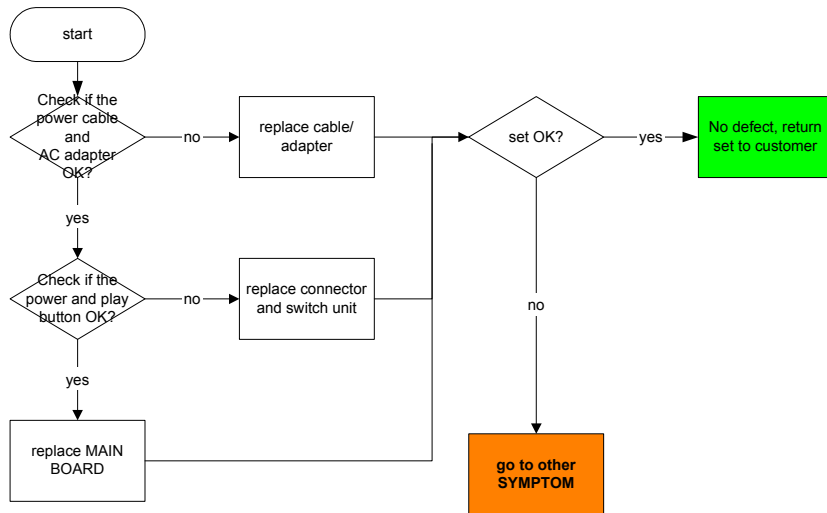
Region Code	Region
1	USA
2	EUROPE
3	ASIA PACIFIC
4	AUSTRALIA, NEW ZEALAND, LATAM
5	RUSSIA, INDIA
6	CHINA

REMARKS:

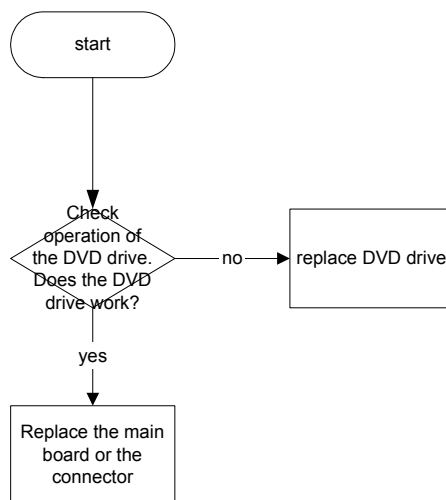
1. Password is **CONFIDENTIAL**.
2. Region code is printed on product type plate. Due to DVD legislation region codes different to assigned region may not be released.

5.0 TROUBLESHOOTING & SERVICE TIPS

SYMPTOM: NO POWER, NO GREEN LED

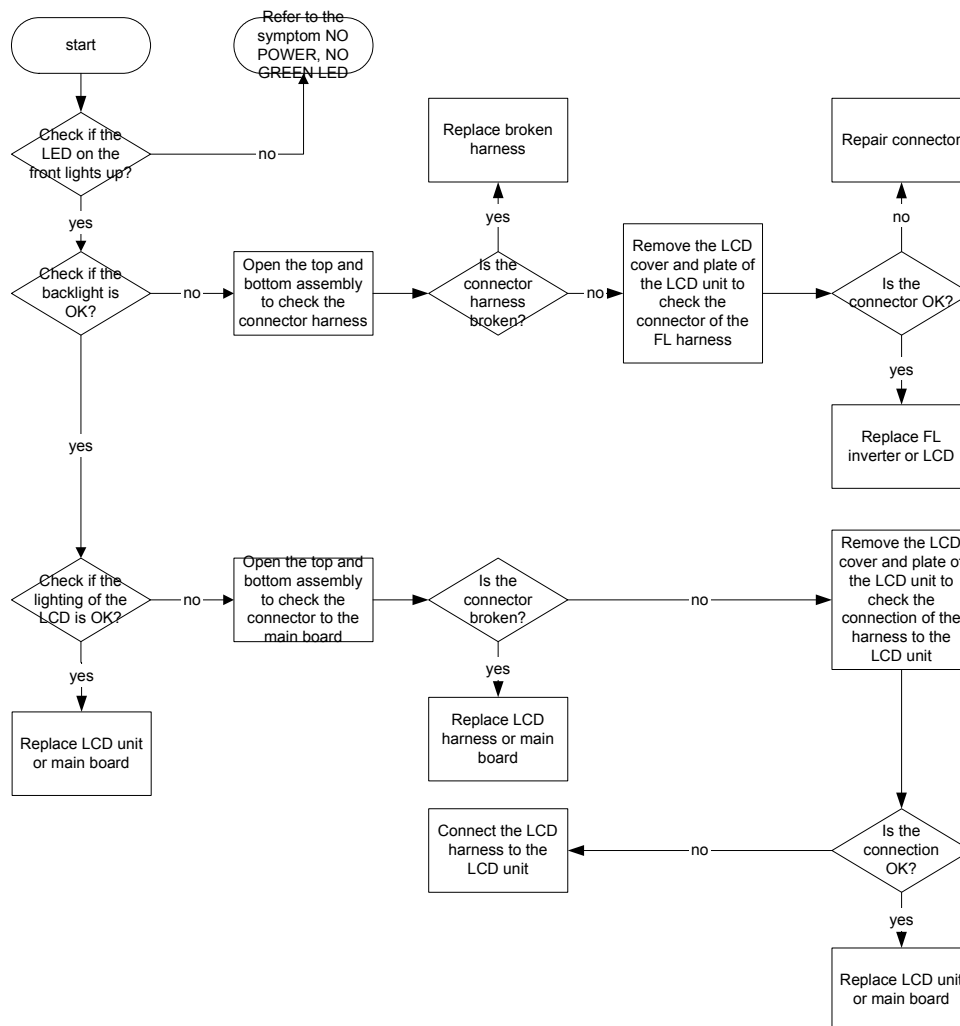


SYMPTOM: NO IMAGE OR SOUND COMES OUT FROM THE EXTERNAL OUTPUT

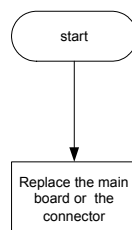


5.0 TROUBLESHOOTING & SERVICE TIPS

SYMPTOM: THE INITIAL SCREEN IS NOT DISPLAYED ON THE LCD

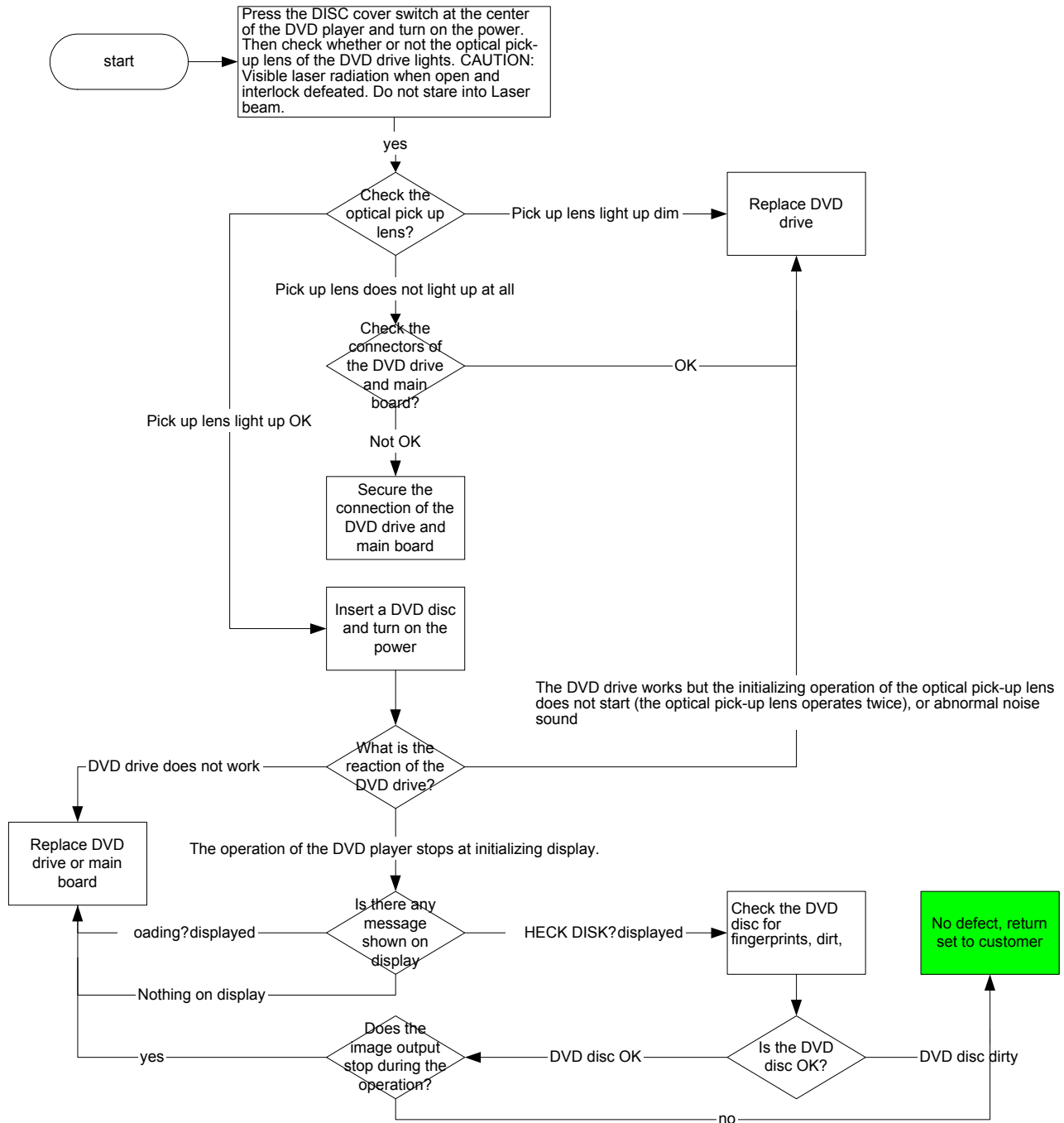


SYMPTOM: NO IMAGE OR SOUND COMES OUT FROM THE EXTERNAL INPUT



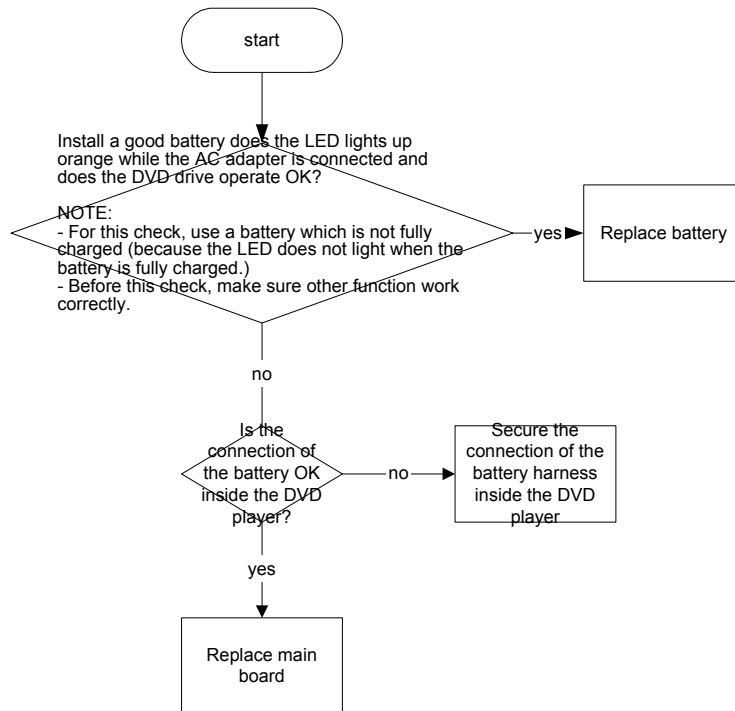
5.0 TROUBLESHOOTING & SERVICE TIPS

SYMPTOM: THE DVD DRIVE DOES NOT WORK

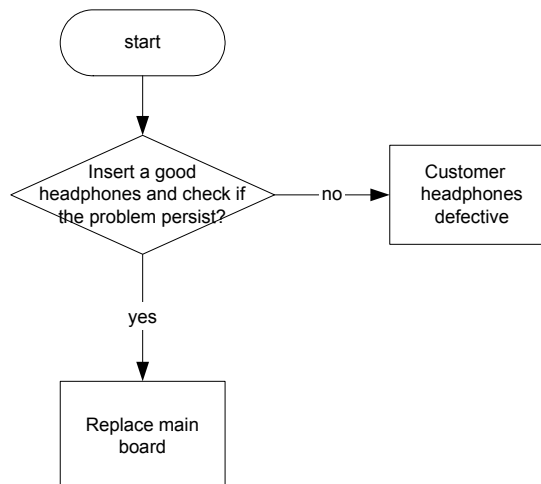


5.0 TROUBLESHOOTING & SERVICE TIPS

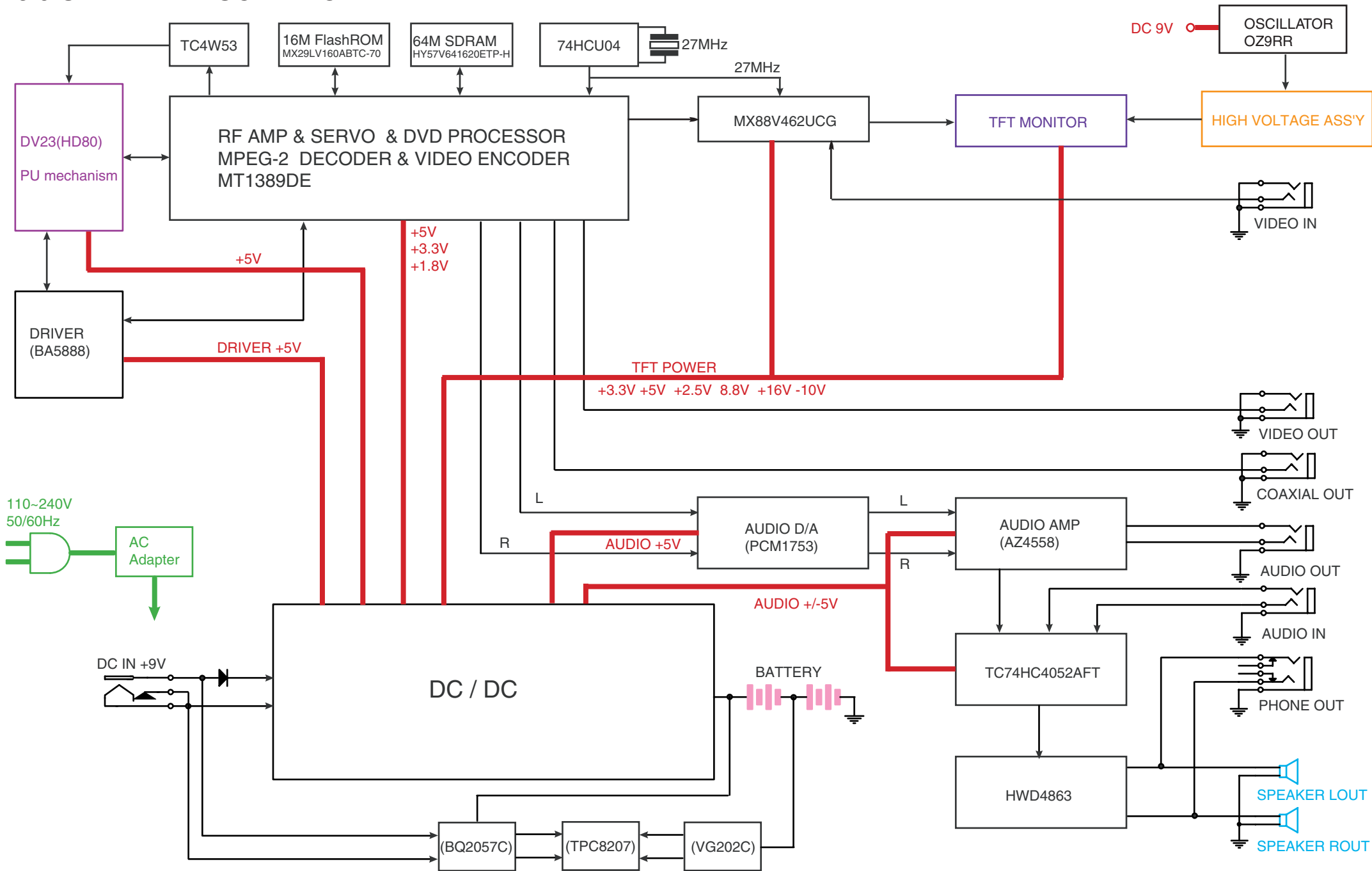
SYMPTOM: THE DVD DRIVE DOES NOT OPERATE WITH BATTERY



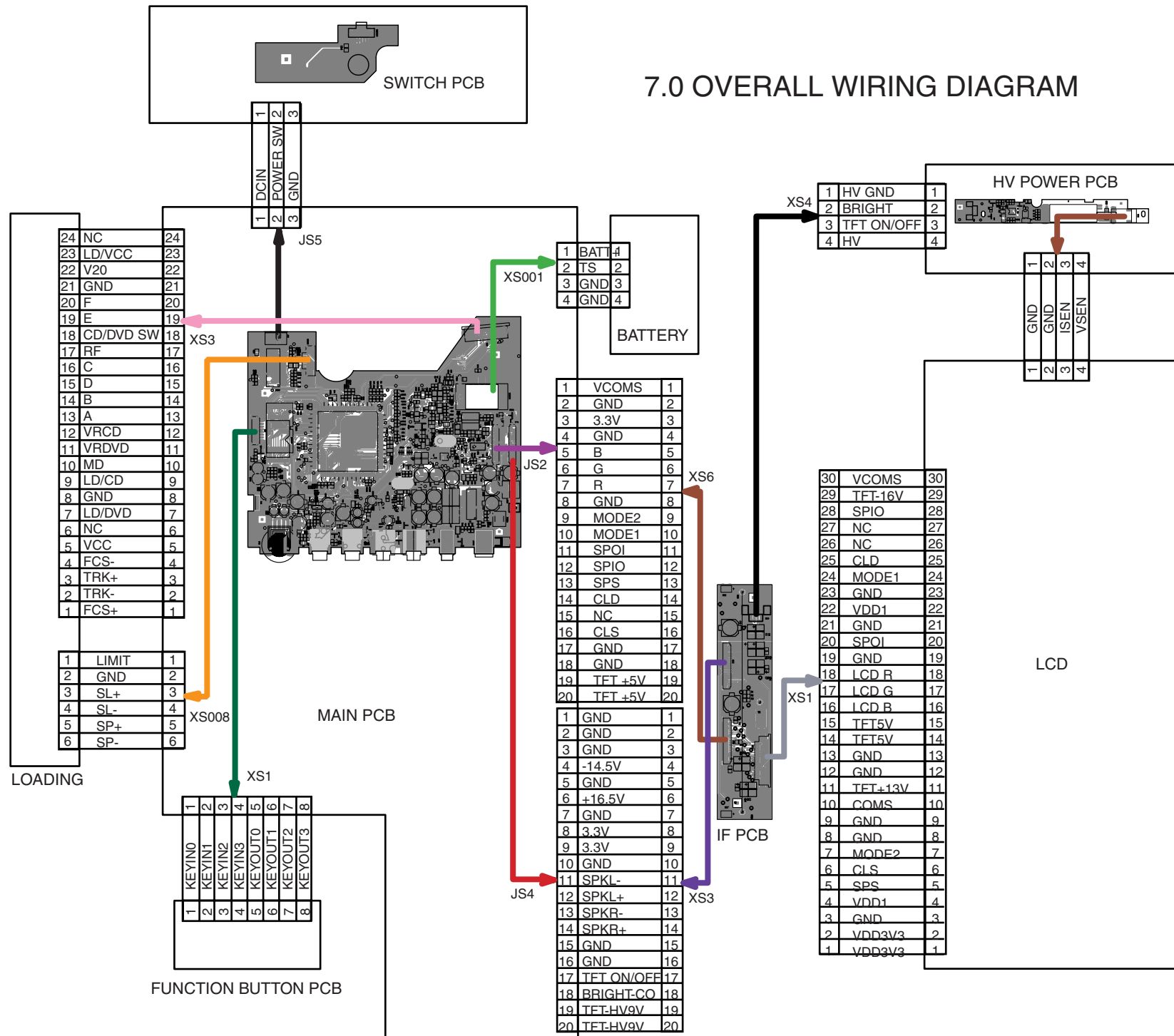
SYMPTOM: NO SOUND COMES FROM THE HEADPHONES



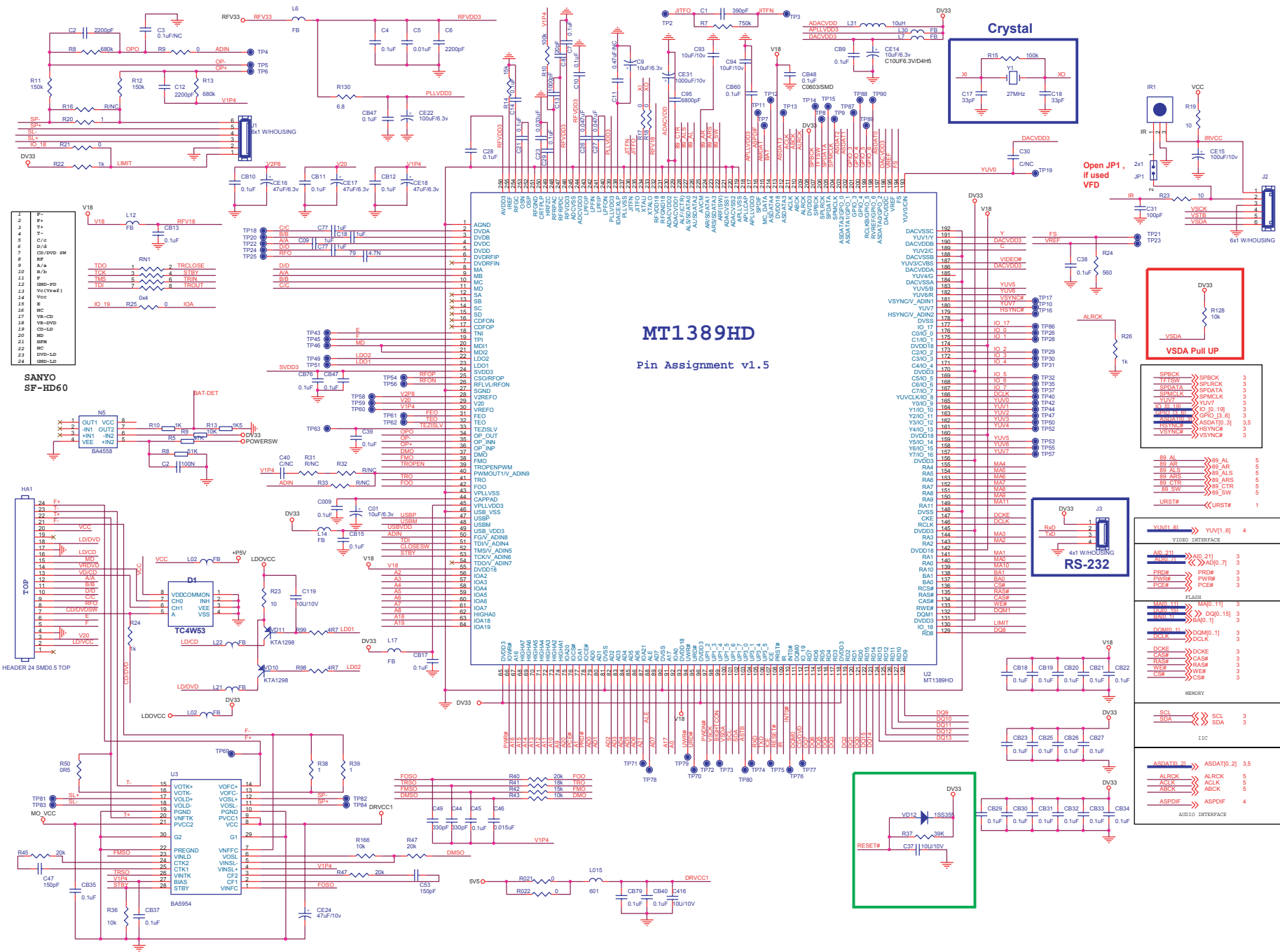
6.0 OVERALL BLOCK DIAGRAM



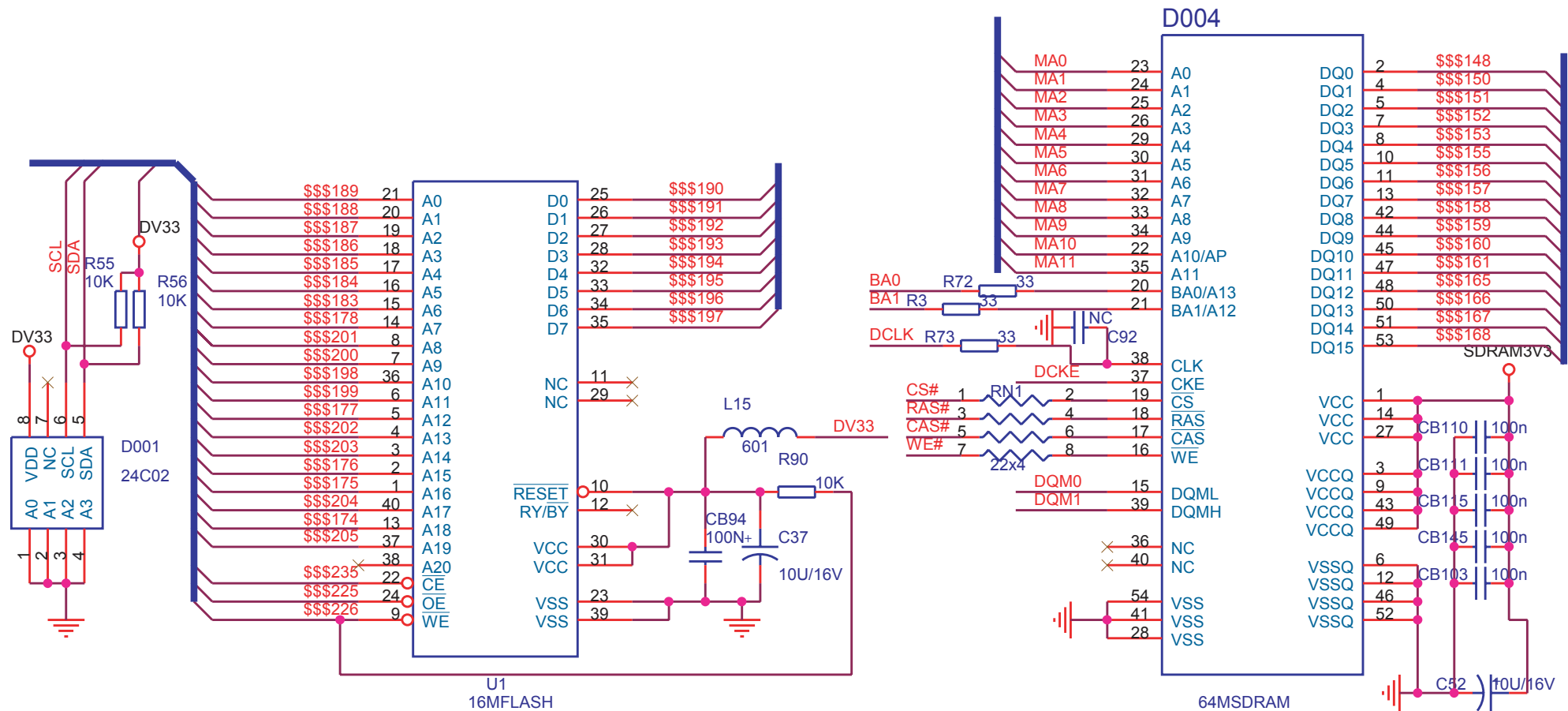
7.0 OVERALL WIRING DIAGRAM



8.0 ELECTRICAL DIAGRAM
MAIN BOARD CIRCUIT DIAGRAM (MPEG)

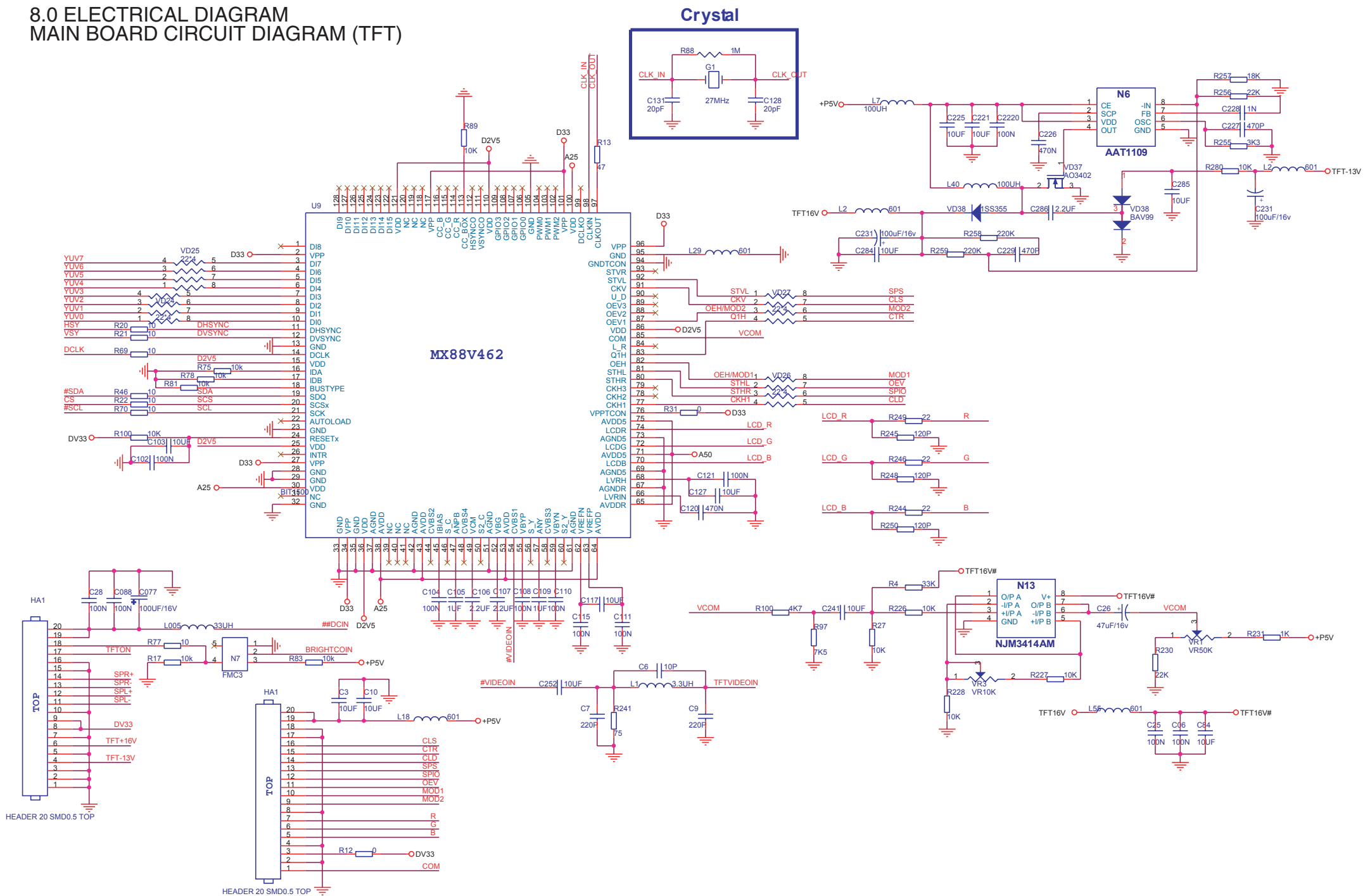


8.0 ELECTRICAL DIAGRAM
MAIN BOARD CIRCUIT DIAGRAM (FLASH & SDRAM)

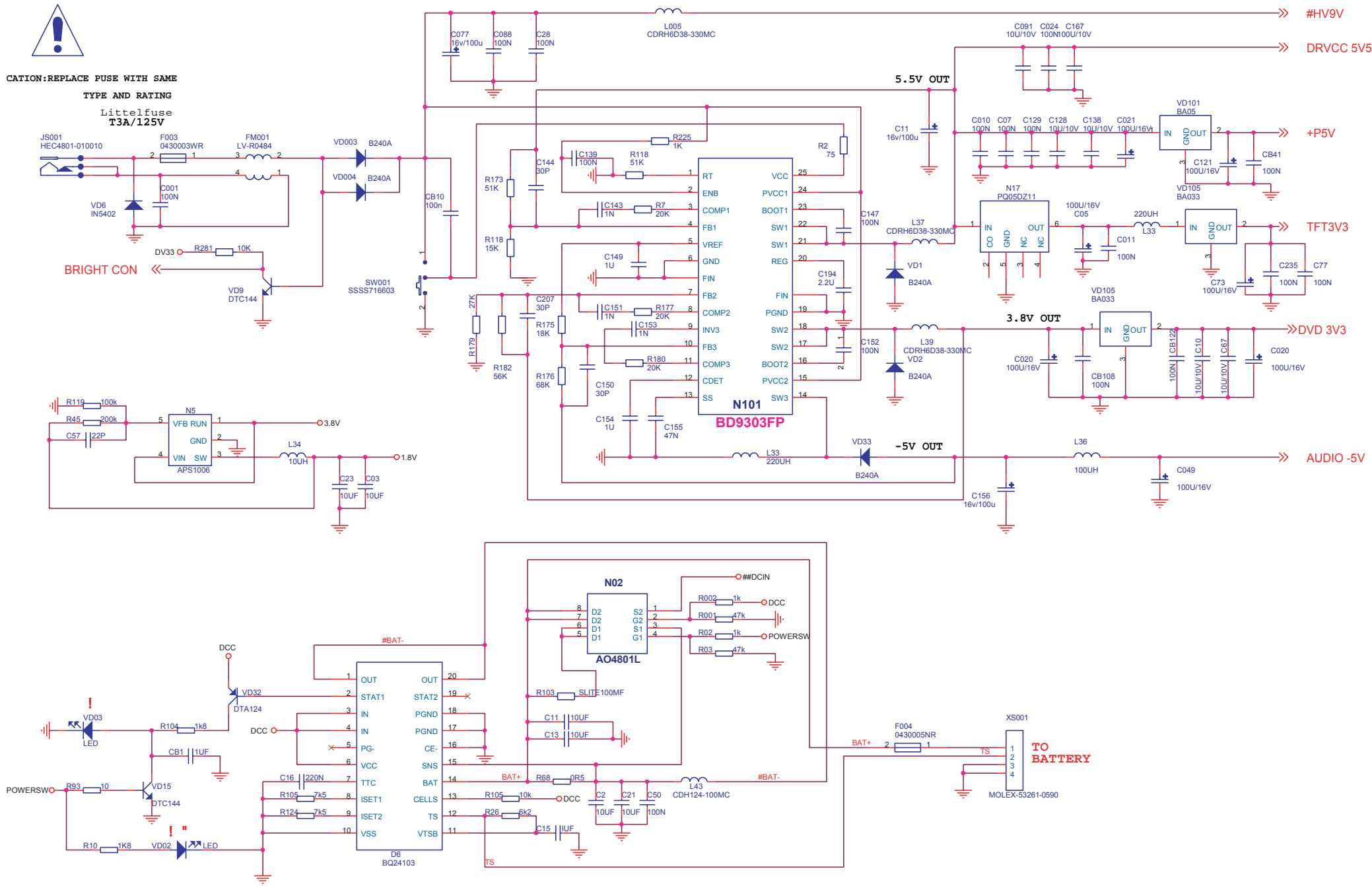


8.0 ELECTRICAL DIAGRAM

MAIN BOARD CIRCUIT DIAGRAM (TFT)

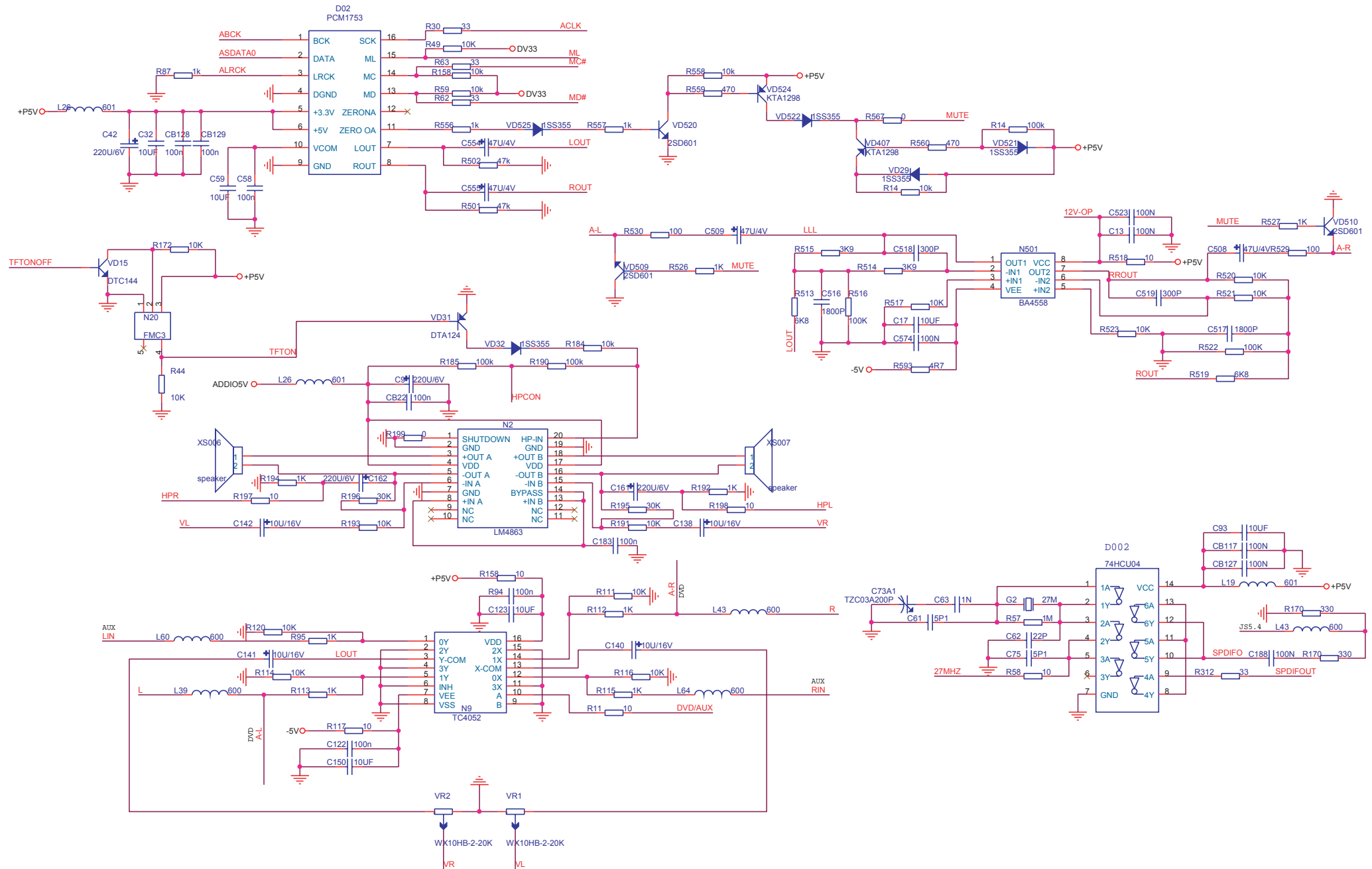


8.0 ELECTRICAL DIAGRAM
MAIN BOARD CIRCUIT DIAGRAM (DC POWER)

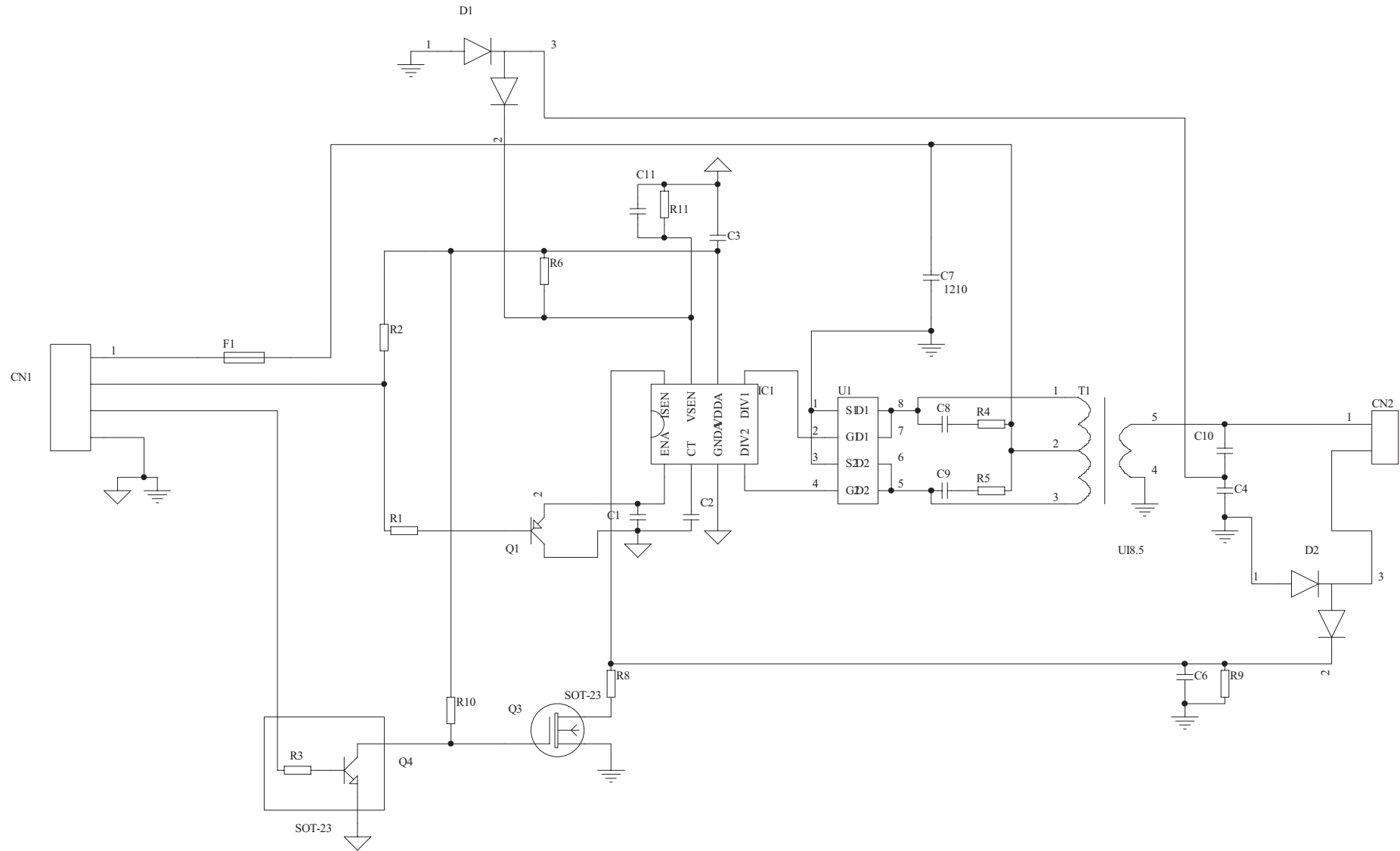


8.0 ELECTRICAL DIAGRAM

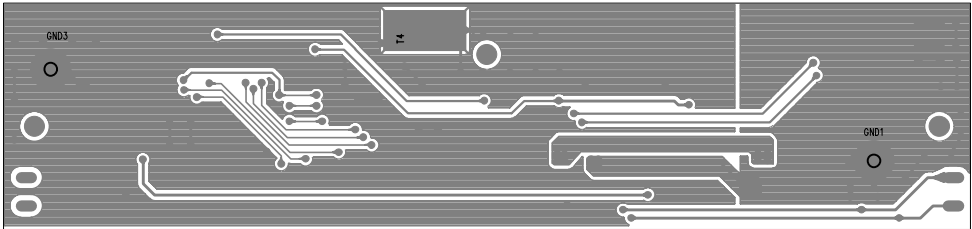
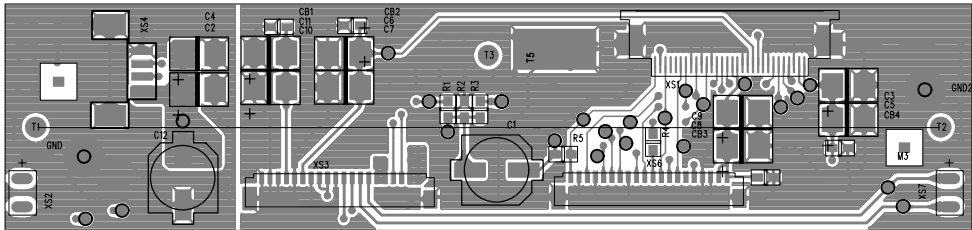
MAIN BOARD CIRCUIT DIAGRAM (AUDIO)



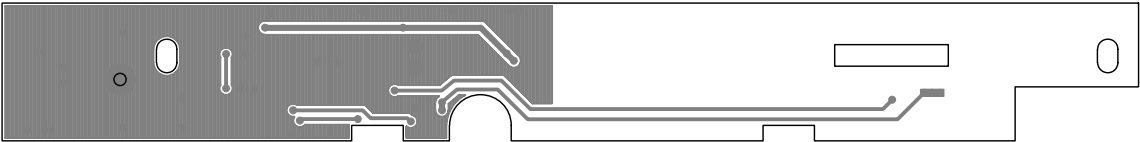
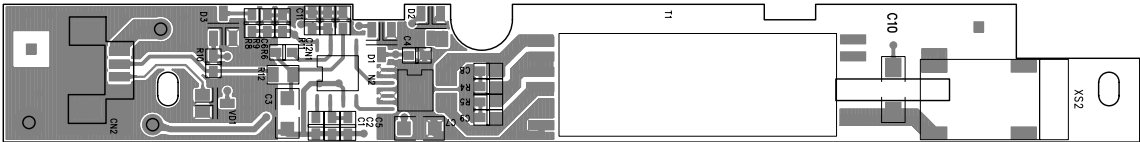
8.0 ELECTRICAL DIAGRAM - HIGH VOLTAGE BOARD CIRCUIT DIAGRAM



9.0 COMPONENT LAYOUT

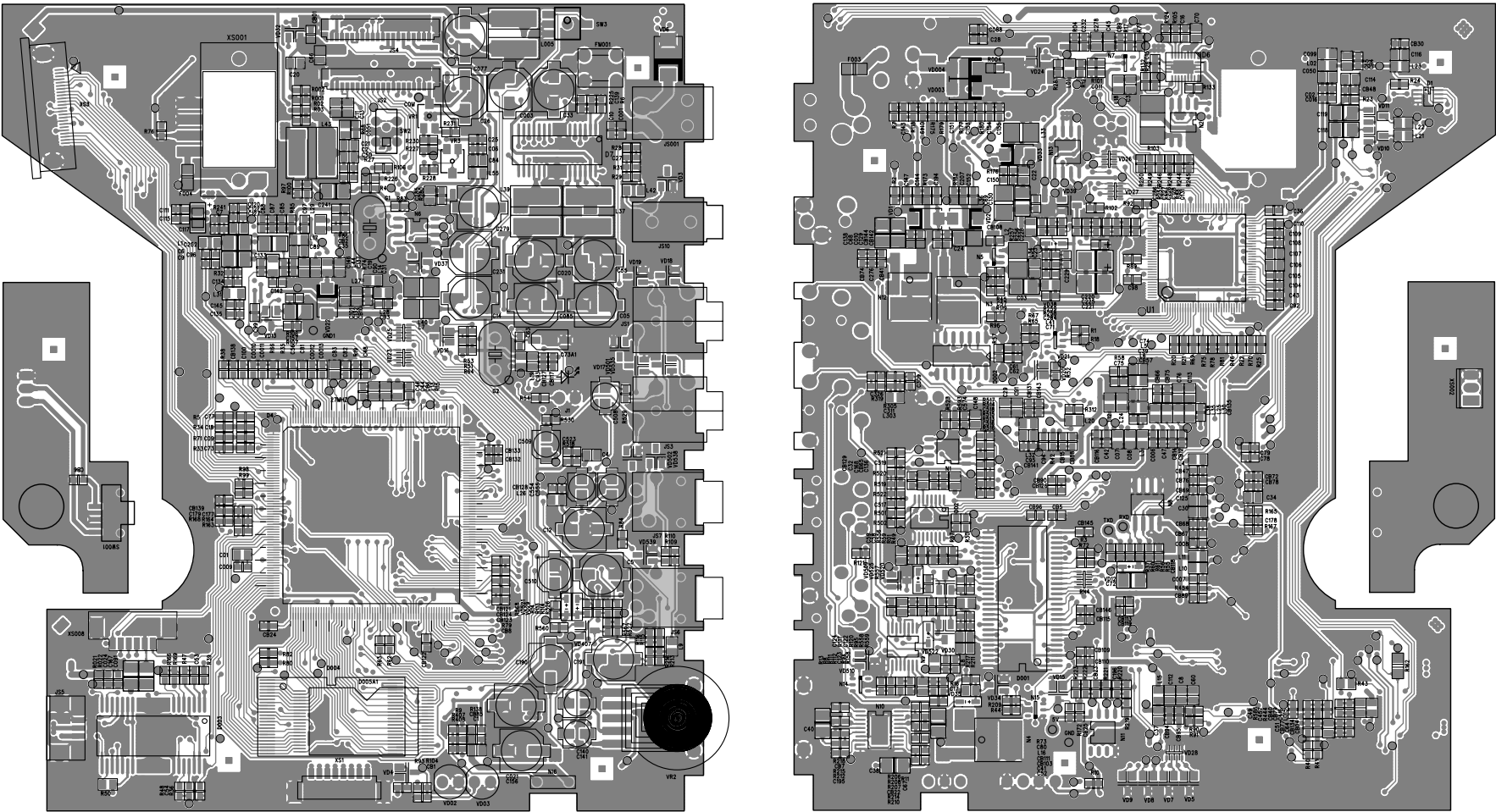


IF BOARD DIAGRAM



HV BOARD DIAGRAM

9.0 COMPONENT LAYOUT



MAIN BOARD DIAGRAM

10.0 SERVICE PARTS LIST

The following service BOMs are applied for all version unless specified.

Model#	Service 12NC	Description	Photos	Location Code
PET724 PET725 PET728	994000004182	LITHIUM BATTERY		BATTERY
PET724 PET725 PET728	994000001912	PET725 AV CABLE		AVCABLE
PET725 PET728	994000004528	TRAVEL BAG		BAG
PET724 PET725 PET728	994000003945	RC-810 REMOTE CONTROL		RC
PET724 PET725 PET728	994000003948	CAR CIGARETTE ADAPTER		CARADAPTOR
PET724/37	994000004183	ADPV25A AC POWER ADAPTER/37		ACADAPTOR
PET725/00 PET725/58 PET728/00	994000003946	ADPV26A AC POWER ADAPTOR/00		ACADAPTOR
PET725/05	994000003524	ADPV18A AC POWER ADAPTER/05		ACADAPTOR
PET725/44	994000005198	ADPV18A AC POWER ADAPTOR/44		ACADAPTOR
PET725/75	994000005792	ADPV18A AC POWER ADAPTOR/75		ACADAPTOR
PET725/93	996500039077	ADPV25A AC POWER ADAPTOR/93		ACADAPTOR

10.0 SERVICE PARTS LIST

The following service BOMs are applied for all version unless specified.

Model#	Service 12NC	Description	Photos	Location Code
PET724 PET725 PET728	994000004191	PET724 MAIN PCBA		100
PET725/58	996500038604	PET725/58 MAIN PCBA (for S/N: LL01xxxxxxx)		100
	996510002003	PET725/58 LED MAIN PCBA (for S/N: LL2Bxxxxxxx)		
PET724 PET725 PET728	994000002151	IF PCBA (for S/N: LL01xxxxxxx)		110
PET725/58	996510002005	PET725/58 LED IF PCBA (for S/N: LL2Bxxxxxxx)		
PET724 PET725 PET728	994000004192	HV PCBA (for S/N: LL01xxxxxxx)		120
PET725/58	996510002004	PET725/58 LED HV PCBA (for S/N: LL2Bxxxxxxx)		
PET724 PET725 PET728	994000004193	FUNCTION PCBA		130
PET724 PET725 PET728	994000004194	20 PIN HARNESS (LE115)		143
PET724 PET725 PET728	994000002242	20 PIN HARNESS (LE140)		144

10.0 SERVICE PARTS LIST

The following service BOMs are applied for all version unless specified.

Model#	Service 12NC	Description	Photos	Location Code
PET724 PET725 PET728	994000004203	LB070W02 TFT LCD (for S/N: LL01xxxxxxx)		200
PET725/58	996510001275	LB070W02-TME1-SC TFT LCD (for S/N: LL2Bxxxxxxx)		
PET724 PET725 PET728	994000002228	DV23 LOADING ASS'Y		210
PET724 PET725 PET728	994000002157	SPEAKER		220
PET724 PET725 PET728	994000004196	PET724 SPEAKER GRILL		230
PET724	994000004187	PET724 TOP COVER		300
PET725 PET728	994000004526	PET725 TOP COVER		300
PET724 PET725 PET728	994000004188	PET724 DISPLAY FRAME		310
PET724 PET725 PET728	994000004184	PET724 MIDDLE CABINET		320

10.0 SERVICE PARTS LIST

The following service BOMs are applied for all version unless specified.

Model#	Service 12NC	Description	Photos	Location Code
PET724/37	994000004186	PET724 BASE COVER		330
PET725/00 PET725/05 PET728/00	994000004525	PET725 BASE COVER		330
PET725/44	994000005199	PET725/44 BOTTOM COVER		330
PET725/75	994000005793	PET725/75 BASE COVER		330
PET725/58	996500038603	PET725/58 BASE COVER		330
PET724	994000004195	PET724 KEY DISCRETENESS		350
PET725 PET728	994000004527	PET725 KEY DISCRETENESS		350
PET724	994000004185	PET724 DOOR DISCRETENESS		360
PET725 PET728	994000004524	PET725 DOOR DISCRETENESS		360

10.0 SERVICE PARTS LIST

The following service BOMs are applied for all version unless specified.

Model#	Service 12NC	Description	Photos	Location Code
PET725 PET728	996500040950	DOOR HOOK		400
PET724 PET725 PET728	994000004189	PET724 DOOR SPRING		410
PET724 PET725 PET728	994000002469	TOP COVER SPRING		420
PET728/00	314017910141	DTM150 TECHNICAL SET		330
PET728/00	314107941051	ADAPTOR AC TO DC 9V 1.11A		ACADAPTOR
PET728/00	314107941041	ANTENNA CABLE		ANTENNA
PET728/00	313923810891	RC19137008/01 REMOTE		RC
PET728/00	31410791061	SCART CABLE AY3929		SCABLE

11.0 REVISION LIST

Version 1.0 (3141 785 30830)

- Initial release PET724 & PET725

Version 1.1 (3141 785 30831)

- Updated service parts to include PET725/44

Version 1.2 (3141 785 30832)

- Updated service parts to include PET725/75 and PET725/58

Version 1.3 (3141 785 30833)

- Updated service parts to include PET725/93 (996500039077 ADPV25A AC ADAPTOR/93)

Version 1.4 (3141 785 30834)

- Updated service parts to include door hook with 12NC 996500040950
- Updated service hint on handle old and new main PCBA
- Added location code on spare parts

Version 1.5 (3141 785 30835)

- Updated service parts to include DTM150 set and its accessories for PET728

Version 1.6 (3141 785 30836)

- Updated service parts to include new service part for PET725/58 with S/N: LL2Bxxxxxxxx